

Calem R. Hoffman

EDUCATION	Ph.D., Physics, Florida State University, Spring 2009 B.S., Physics, Florida State University, Fall 2003
POSITIONS HELD	Physicist Physics Division, Argonne National Laboratory, April 2017 - Present Assistant Physicist Physics Division, Argonne National Laboratory, August 2012 - March 2017 Argonne Director's Fellow Physics Division, Argonne National Laboratory, October 2010 - August 2012 Postdoctoral Researcher Physics Division, Argonne National Laboratory, May 2009 - October 2010 Graduate Research Assistant Department of Physics, Florida State University, May 2005 - May 2009 Graduate Teaching Assistant Department of Physics, Florida State University, January 2005 - May 2005 Department of Physics & Astronomy, Michigan State University, September 2004 - December 2004
AWARDS	Dissertation Award in Nuclear Physics American Physical Society Division of Nuclear Physics, February 2010 John D. Fox Award in Nuclear Physics Department of Physics, Florida State University, April 2007
RESEARCH INTERESTS	Low-energy nuclear structure physics, with a focus on the evolution of the single-particle shell structure from stability towards the limits of nucleon binding.
PEER-REVIEWED PUBLICATIONS	<p>2021</p> <ol style="list-style-type: none">1. Border of the island of inversion: Unbound states in ^{29}Ne M. Holl et al. (SAMURAI21 Collaboration) Phys. Rev. C 105, 034301 (2022)2. $\nu i_{13/2}$ structures in ^{155}Sm and ^{159}Gd: Supporting evidence of a $Z = 60$ deformed subshell gap D. J. Hartley, F. G. Kondev, M. P. Carpenter, R. V. F. Janssens, M. A. Riley, K. Villafana, K. Auranen, A. D. Ayangeakaa, J. S. Baron, A. J. Boston, J. A. Clark, J. P. Greene, J. Heery, C. R. Hoffman, T. Lauritsen, J. Li, D. Little, E. S. Paul, G. Savard, D. Seweryniak, J. Simpson, S. Stolze, G. L. Wilson, J. Wu, and S. Zhu Phys. Rev. C 105, 014301 (2022)3. Evolution of single-particle structure near the $N = 20$ island of inversion P. T. MacGregor, D. K. Sharp, S. J. Freeman, C. R. Hoffman, B. P. Kay, T. L. Tang, L. P. Gaffney, E. F. Baader, M. J. G. Borge, P. A. Butler, W. N. Catford, B. D. Cropper, G. de Angelis, J. Konki, Th. Krill, M. Labiche, I. H. Lazarus, R. S. Lubna, I. Martel, D. G. McNeil, R. D. Page, O. Poleshchuk, R. Raabe, F. Recchia, and J. Yang Phys. Rev. C 104, L051301 (2021)

4. Shapes, softness, and nonyrast collectivity in ^{186}W
 V. S. Prasher *et al.*
[Phys. Rev. C 104, 044318 \(2021\)](#)
5. New constraints on the $^{25}\text{Al}(p,\gamma)$ reaction and its influence on the flux of cosmic γ rays from classical nova explosions
 L. Canete, G. Lotay, G. Christian, D. T. Doherty, W. N. Catford, S. Hallam, D. Seweryniak, H. M. Albers, S. Almaraz-Calderon, E. A. Bennett, M. P. Carpenter, C. J. Chiara, J. P. Greene, C. R. Hoffman, R. V. F. Janssens, J. Jos, A. Kankainen, T. Lauritsen, A. Matta, M. Moukaddam, S. Ota, A. Saastamoinen, R. Wilkinson, and S. Zhu
[Phys. Rev. C 104, L022802 \(2021\)](#)
6. Configuration mixing in ^{28}Mg and the $^{26}\text{Mg}(t,p)^{28}\text{Mg}$ reaction
 D. G. McNeel, A. H. Wuosmaa, S. A. Kuvin, J. Smith, B. B. Back, J. Chen, C. R. Hoffman, B. P. Kay, G. L. Wilson, D. K. Sharp, R. M. Clark, H. L. Crawford, P. Fallon, and A. O. Macchiavelli
[Phys. Rev. C 103, 064320 \(2021\)](#)
7. Possible quenching of static neutron pairing near the $N = 98$ deformed shell gap: Rotational structures in $^{160,161}\text{Gd}$
 D. J. Hartley *et al.*
[Phys. Rev. C 103, 034322 \(2021\)](#)
8. Coriolis coupling effects in proton-pickup spectroscopic factors from ^{12}B
 A. O. Macchiavelli, H. L. Crawford, R. M. Clark, P. Fallon, I. Y. Lee, C. Morse, C. M. Campbell, M. Cromaz, C. Santamaria, J. Chen, C. R. Hoffman, and B. P. Kay
[Phys. Rev. C 103, 034307 \(2021\)](#)
- 2020
9. Search for the $1/2^+$ intruder state in ^{35}P
 M. Salathe, H. L. Crawford, A. O. Macchiavelli, B. P. Kay, C. R. Hoffman, A. D. Ayangeakaa, C. M. Campbell, R. M. Clark, M. Cromaz, P. Fallon, M. D. Jones, S. A. Kuvin, J. Sethi, M. Wiedeking, J. R. Winkelbauer, and A. H. Wuosmaa
[Phys. Rev. C 102, 064317 \(2020\)](#)
10. Extending the Southern Shore of the Island of Inversion to ^{28}F
 A. Revel *et al.* (SAMURAI21 collaboration)
[Phys. Rev. Lett. 124, 152502 \(2020\)](#)
11. High- K , two-quasiparticle states in ^{160}Gd
 D. J. Hartley, F. G. Kondev, G. Savard, J. A. Clark, A. D. Ayangeakaa, S. Bottani, M. P. Carpenter, P. Copp, K. Hicks, C. R. Hoffman, R. V. F. Janssens, T. Lauritsen, R. Orford, J. Sethi, and S. Zhu
[Phys. Rev. C 101, 044301 \(2020\)](#)
12. First Exploration of Neutron Shell Structure below Lead and beyond $N = 126$
 T. L. Tang, B. P. Kay, C. R. Hoffman, J. P. Schiffer, D. K. Sharp, L. P. Gaffney, S. J. Freeman, M. R. Mumpower, A. Arokiaraj, E. F. Baader, P. A. Butler, W. N. Catford, G. de Angelis, F. Flavigny, M. D. Gott, E. T. Gregor, J. Konki, M. Labiche, I. H. Lazarus, P. T. MacGregor, I. Martel, R. D. Page, Zs. Podolyk8, O. Poleshchuk, R. Raabe, F. Recchia, J. F. Smith, S. V. Szwec, and J. Yang
[Phys. Rev. Lett. 124 062502 \(2020\)](#)
- 2019
13. Experimental study of the low-lying negative-parity states in ^{11}Be using the $^{12}\text{B}(d,^3\text{He})^{11}\text{Be}$ reaction
 J. Chen, K. Auranen, M. L. Avila, B. B. Back, M. A. Caprio, C. R. Hoffman, D. Gorelov, B. P. Kay, S. A. Kuvin, Q. Liu, J. L. Lou, A. O. Macchiavelli, D. G. McNeel, T. L. Tang, D. Santiago-Gonzalez, R. Talwar, J. Wu, G. Wilson, R. B. Wiringa, Y. L. Ye, C. X. Yuan, and H. L. Zang
[Phys. Rev. C 100, 064314 \(2019\)](#)

2018

14. Identification of γ -decaying resonant states in ^{26}Mg and their importance for the astrophysical s process
G. Lotay, D. T. Doherty, D. Seweryniak, S. Almaraz-Calderon, M. P. Carpenter, C. J. Chiara, H. M. David, C. R. Hoffman, R. V. F. Janssens, A. Kankainen, T. Lauritsen, R. Wilkinson, P. J. Woods, S. Zhu
[Eur. Phys. J. A 55, 109 \(2019\)](#)
15. Proton decay of ^{108}I and its significance for the termination of the astrophysical rp -process
K. Auranen, D. Seweryniak, M. Albers, A. D. Ayangeakaa, S. Bottoni, M. P. Carpenter, C. J. Chiara, P. Copp, H. M. David, D. T. Doherty, J. Harker, C. R. Hoffman, R. V. F. Janssens, T. L. Khoo, S. A. Kuvin, T. Lauritsen, G. Lotay, A. M. Rogers, C. Scholey, J. Sethi, R. Talwar, W. B. Walters, P. J. Woods and S. Zhu
[Phys. Lett. B792, 187 \(2019\)](#)
16. Superallowed α Decay to Doubly Magic ^{100}Sn
K. Auranen, D. Seweryniak, M. Albers, A. D. Ayangeakaa, S. Bottoni, M. P. Carpenter, C. J. Chiara, P. Copp, H. M. David, D. T. Doherty, J. Harker, C. R. Hoffman, R. V. F. Janssens, T. L. Khoo, S. A. Kuvin, T. Lauritsen, G. Lotay, A. M. Rogers, J. Sethi, C. Scholey, R. Talwar, W. B. Walters, P. J. Woods, and S. Zhu
[Phys. Rev. Lett. 121, 182501 \(2018\)](#)
17. Sub-shell closure and shape coexistence in the transitional nucleus ^{98}Zr
W. Witt, V. Werner, N. Pietralla, M. Albers, A. D. Ayangeakaa, B. Bucher, M. P. Carpenter, D. Cline, H. M. David, A. Hayes, C. R. Hoffman, R. V. F. Janssens, B. P. Kay, F. G. Kondev, W. Korten, T. Lauritsen, O. Mller, G. Rainovski, G. Savard, D. Seweryniak, J. Smith, R. Stegmann, S. Zhu, and C. Y. Wu
[Phys. Rev. C 98, 041302\(R\), \(2018\)](#)
18. Two-neutron and core-excited states in ^{210}Pb : Tracing $E3$ collectivity and evidence for a new β -decaying isomer in ^{210}Tl
R. Broda, L. W. Iskra, R. V. F. Janssens, B. A. Brown, B. Fornal, J. Wrzesinski, N. Cieplicka-Orynczak, M. P. Carpenter, C. J. Chiara, C. R. Hoffman, F. G. Kondev, G. J. Lane, T. Lauritsen, Zs. Podolyak, D. Seweryniak, W. B. Walters, and S. Zhu
[Phys. Rev. C 98, 024324 \(2018\)](#)
19. Experimental study of the effective nucleon-nucleon interaction using the $^{21}\text{F}(d,p)^{22}\text{F}$ reaction
J. Chen, C. R. Hoffman, T. Ahn, K. Auranen, M. L. Avila, B. B. Back, D. W. Bardayan, D. Blankstein, P. Copp, D. Gorelov, B. P. Kay, S. A. Kuvin, J. P. Lai, D. G. McNeel, P. D. O'Malley, A. M. Rogers, D. Santiago-Gonzalez, J. P. Schiffer, J. Sethi, R. Talwar, and J. R. Winkelbauer
[Phys. Rev. C 98, 014325 \(2018\)](#)
20. Novel $\Delta J = 1$ Sequence in ^{78}Ge : Possible Evidence for Triaxiality
A. M. Forney, W. B. Walters, C. J. Chiara, R. V. F. Janssens, A. D. Ayangeakaa, J. Sethi, J. Harker, M. Alcorta, M. P. Carpenter, G. Gurdal, C. R. Hoffman, B. P. Kay, F. G. Kondev, T. Lauritsen, C. J. Lister, E. A. McCutchan, A. M. Rogers, D. Seweryniak, I. Stefanescu, and S. Zhu
[Phys. Rev. Lett. 120, 212501 \(2018\)](#)
21. Position-sensitive, Fast Ionization Chambers
J. Lai, L. Afanasieva, J.C. Blackmon, C.M. Deibel, H.E. Gardiner, A. Lauer, L.E. Linhardt, K.T. Macon, B.C. Rasco, C. Williams, D. Santiago-Gonzalez, S.A. Kuvin, S. Almaraz-Calderon, L.T. Baby, J. Baker, J. Belarge, I. Wiedenhver, E. Need, M.L. Avila, B.B. Back, B. DiGiovine, and C.R. Hoffman
[Nucl. Instr. Meth. A 890, 119 \(2008\)](#)

22. **Experimental study of $^{38}\text{Ar} + \alpha$ reaction cross sections relevant to the ^{41}Ca abundance in the solar system**
 R. Talwar, M. J. Bojazi, P. Mohr, K. Auranen, M. L. Avila, A. D. Ayangeakaa, J. Harker, C. R. Hoffman, C. L. Jiang, S. A. Kuvin, B. S. Meyer, K. E. Rehm, D. Santiago-Gonzalez, J. Sethi, C. Ugalde, and J. R. Winkelbauer
[Phys. Rev. C 97, 055801 \(2018\)](#)
23. **Masses and β -Decay Spectroscopy of Neutron-Rich Odd-Odd $^{160,162}\text{Eu}$ Nuclei: Evidence for a Subshell Gap with Large Deformation at $N = 98$**
 D. J. Hartley, F. G. Kondev, R. Orford, J. A. Clark, G. Savard, A. D. Ayangeakaa, S. Bottoni, F. Buchinger, M. T. Burkey, M. P. Carpenter, P. Copp, D. A. Gorelov, K. Hicks, C. R. Hoffman, C. Hu, R. V. F. Janssens, J. W. Klimes, T. Lauritsen, J. Sethi, D. Seweryniak, K. S. Sharma, H. Zhang, S. Zhu, and Y. Zhu
[Phys. Rev. Lett. 120, 182502 \(2018\)](#)
24. **Probing the Single-Particle Character of Rotational States in ^{19}F Using a Short-Lived Isomeric Beam**
 D. Santiago-Gonzalez, K. Auranen, M. L. Avila, A. D. Ayangeakaa, B. B. Back, S. Bottoni, M. P. Carpenter, J. Chen, C. M. Deibel, A. A. Hood, C. R. Hoffman, R. V. F. Janssens, C. L. Jiang, B. P. Kay, S. A. Kuvin, A. Lauer, J. P. Schiffer, J. Sethi, R. Talwar, I. Wiedenhover, J. Winkelbauer, and S. Zhu
[Phys. Rev. Lett. 120, 122503 \(2018\)](#)
25. **Reaction rate for carbon burning in massive stars**
 C. L. Jiang, D. Santiago-Gonzalez, S. Almaraz-Calderon, K. E. Rehm, B. B. Back, K. Auranen, M. L. Avila, A. D. Ayangeakaa, S. Bottoni, M. P. Carpenter, C. Dickerson, B. DiGiovine, J. P. Greene, C. R. Hoffman, R. V. F. Janssens, B. P. Kay, S. A. Kuvin, T. Lauritsen, R. C. Pardo, J. Sethi, D. Seweryniak, R. Talwar, C. Ugalde, S. Zhu, D. Bourgin, S. Courtin, F. Haas, M. Heine, G. Fruet, D. Montanari, D. G. Jenkins, L. Morris, A. Lefebvre-Schuhl, M. Alcorta, X. Fang, X. D. Tang, B. Bucher, C. M. Deibel, and S. T. Marley
[Phys. Rev. C 97, 012801\(R\) \(2018\)](#)

2017

26. **Nucleon correlations and the structure of $^{71}_{30}\text{Zn}^{41}$,**
 S. Bottoni, S. Zhu, R. V. F. Janssens, M. P. Carpenter, Y. Tsunoda, T. Otsuka, A. O. Macchiavelli, D. Cline, C. Y. Wu, A. D. Ayangeakaa, B. Bucher, M. Q. Buckner, C. M. Campbell, C. J. Chiara, H. L. Crawford, M. Cromaz, H. M. David, P. Fallon, A. Gade, J. P. Greene, J. Harker, A. B. Hayes, C. R. Hoffman, B. P. Kay, A. Korichi, T. Lauritsen, J. Sethi, D. Seweryniak, W. B. Walters, D. Weisshaar, A. Wiens
[Phys. Lett. B 775, 271 \(2017\)](#)
27. **Effect of Weak Binding on the Apparent Spin-Orbit Splitting in Nuclei**
 B. P. Kay, C. R. Hoffman, and A. O. Macchiavelli
[Phys. Rev. Lett. 119, 182502 \(2017\)](#)
28. **α decay of the $T = 1, 2^+$ state in ^{10}B and isospin symmetry breaking in the $A = 10$ triplet**
 S. A. Kuvin, A. H. Wuosmaa, C. J. Lister, M. L. Avila, C. R. Hoffman, B. P. Kay, D. G. McNeel, C. Morse, E. A. McCutchan, D. Santiago-Gonzalez, and J. R. Winkelbauer
[Phys. Rev. C 96, 041301\(R\) \(2017\)](#)
29. **γ spectroscopy of states in ^{32}Cl relevant for the $^{31}\text{S}(p,\gamma) ^{32}\text{Cl}$ reaction rate**
 L. Afanasieva, J. C. Blackmon, C. M. Deibel, J. Lai, L. E. Linhardt, B. C. Rasco, D. Seweryniak, M. Alcorta, M. P. Carpenter, J. A. Clark, C. R. Hoffman, R. V. F. Janssens, and S. Zhu
[Phys. Rev. C 96, 035801 \(2017\)](#)

30. **Study of the $^{26}\text{Al}^m(d,p)^{27}\text{Al}$ Reaction and the Influence of the ^{26}Al 0^+ isomer on the Destruction of ^{26}Al in the Galaxy**
 S. Almaraz-Calderon, K. E. Rehm, N. Gerken, M. L. Avila, B. P. Kay, R. Talwar, A. D. Ayangeakaa, S. Bottini, A. A. Chen, C. M. Deibel, C. Dickerson, K. Hanselman, C. R. Hoffman, C. L. Jiang, S. A. Kuvin, O. Nusair, R. C. Pardo, D. Santiago-Gonzalez, J. Sethi, and C. Ugalde
Phys. Rev. Lett. **119**, 072701 (2017)
31. **In-beam γ -ray spectroscopy studies of medium-spin states in the odd-odd nucleus ^{186}Re**
 D. A. Matters, F. G. Kondev, N. Aoi, Y. Ayyad, A. P. Byrne, M. P. Carpenter, J. J. Carroll, C. J. Chiara, P. M. Davidson, G. D. Dracoulis, Y. D. Fang, C. R. Hoffman, R. O. Hughes, E. Ideguchi, R. V. F. Janssens, S. Kanaya, B. P. Kay, T. Kibedi, G. J. Lane, T. Lauritsen, J. W. McClory, P. Nieminen, S. Noji, A. Odahara, H. J. Ong, A. E. Stuchbery, D. T. Tran, H. Watanabe, A. N. Wilson, Y. Yamamoto, and S. Zhu
Phys. Rev. C **96**, 014318 (2017)
32. **Doubly magic ^{208}Pb : High-spin states, isomers, and $E3$ collectivity in the yrast decay**
 R. Broda, R. V. F. Janssens, L. W. Iskra, J. Wrzesinski, B. Fornal, M. P. Carpenter, C. J. Chiara, N. Cieplicka-Orynczak, C. R. Hoffman, F. G. Kondev, W. Krolas, T. Lauritsen, Zs. Podolyak, D. Seweryniak, C. M. Shand, B. Szpak, W. B. Walters, S. Zhu, and B. A. Brown
Phys. Rev. C **95**, 064308 (2017)
33. **Study of and reactions with a Multi-Sampling Ionization Chamber**
 M. L. Avila and K. E. Rehm, S. Almaraz-Calderon, A. D. Ayangeakaa, C. Dickerson, C. R. Hoffman, C. L. Jiang, B. P. Kay, J. Lai, O. Nusair, R. C. Pardo, D. Santiago-Gonzalez, R. Talwar and C. Ugalde
Nucl. Instr. Meth. A **859**, 63 (2017)
34. **Direct Evidence for Octupole Deformation in ^{146}Ba and the Origin of Large $E1$ Moment Variations in Reflection-Asymmetric Nuclei**
 B. Bucher, S. Zhu, C. Y. Wu, R. V. F. Janssens, R. N. Bernard, L. M. Robledo, T. R. Rodriguez, D. Cline, A. B. Hayes, A. D. Ayangeakaa, M. Q. Buckner, C. M. Campbell, M. P. Carpenter, J. A. Clark, H. L. Crawford, H. M. David, C. Dickerson, J. Harker, C. R. Hoffman, B. P. Kay, F. G. Kondev, T. Lauritsen, A. O. Macchiavelli, R. C. Pardo, G. Savard, D. Seweryniak, and R. Vondrasek
Phys. Rev. Lett. **118**, 152504 (2017)

- 2016
35. **Experimental study of the astrophysically important $^{23}\text{Na}(\alpha,p)^{26}\text{Mg}$ and $^{23}\text{Na}(\alpha,n)^{26}\text{Al}$ reactions**
 M. L. Avila, K. E. Rehm, S. Almaraz-Calderon, A. D. Ayangeakaa, C. Dickerson, C. R. Hoffman, C. L. Jiang, B. P. Kay, J. Lai, O. Nusair, R. C. Pardo, D. Santiago-Gonzalez, R. Talwar, and C. Ugalde
Phys. Rev. C **94**, 065804 (2016)
36. **Neutron single-particle strengths at $N = 40, 42$: Neutron knockout from $^{68,70}\text{Ni}$ ground and isomeric states**
 F. Recchia, D. Weisshaar, A. Gade, J. A. Tostevin, R. V. F. Janssens, M. Albers⁵, V. M. Bader, T. Baugher, D. Bazin, J. S. Berryman, B. A. Brown, C. M. Campbell, M. P. Carpenter, J. Chen, C. J. Chiara, H. L. Crawford, C. R. Hoffman, F. G. Kondev, A. Korichi, C. Langer, T. Lauritsen, S. N. Liddick, E. Lunderberg, S. Noji, C. Prokop, S. R. Stroberg, S. Suchyta, K. Wimmer, and S. Zhu
Phys. Rev. C **94**, 054324 (2016)
37. **Single-particle and collective excitations in ^{62}Ni**
 M. Albers, S. Zhu, A. D. Ayangeakaa, R. V. F. Janssens, J. Gellanki, I. Ragnarsson, M. Alcorta, T. Baugher, P. F. Bertone, M. P. Carpenter, C. J. Chiara, P. Chowdhury, H. M. David, A. N. Deacon, B. DiGiovine, A. Gade, C. R. Hoffman, F. G. Kondev, T. Lauritsen, C. J. Lister, E. A. McCutchan,

- C. Nair, A. M. Rogers, and D. Seweryniak
Phys. Rev. C **94**, 034301 (2016)
38. **Ordering of the $0d_{5/2}$ and $1s_{1/2}$ proton levels in light nuclei**
C. R. Hoffman, B. P. Kay, and J. P. Schiffer
Phys. Rev. C **94**, 024330 (2016)
39. **Population and decay of a $K^\pi = 8^-$ two-quasineutron isomer in ^{244}Pu**
S. S. Hota, S. K. Tandel, P. Chowdhury, I. Ahmad, M. P. Carpenter, C. J. Chiara, J. P. Greene,
C. R. Hoffman, E. G. Jackson, R. V. F. Janssens, B. P. Kay, T. L. Khoo, F. G. Kondev, S. Lakshmi,
S. Lalkovski, T. Lauritsen, C. J. Lister, E. A. McCutchan, K. Moran, D. Peterson, U. Shirwadkar,
D. Seweryniak, I. Stefanescu, Y. Toh, and S. Zhu
Phys. Rev. C **94**, 021303(R) (2016)
40. **Change of nuclear configurations in the neutrinoless double- β decay of $^{130}\text{Te} \rightarrow ^{130}\text{Xe}$ and $^{136}\text{Xe} \rightarrow ^{136}\text{Ba}$**
J. P. Entwistle, B. P. Kay, A. Tamii, S. Adachi, N. Aoi, J. A. Clark, S. J. Freeman, H. Fujita, Y.
Fujita, T. Furuno, T. Hashimoto, C. R. Hoffman, E. Ideguchi, T. Ito, C. Iwamoto, T. Kawabata, B.
Liu, M. Miura, H. J. Ong, J. P. Schiffer, D. K. Sharp, G. Susoy, T. Suzuki, S. V. Szwee, M. Takaki,
M. Tsumura, and T. Yamamoto
Phys. Rev. C **93**, 064312 (2016)
41. **Independent measurement of the Hoyle state β feeding from ^{12}B using Gammasphere**
M. Munch, M. Alcorta, H. O. U. Fynbo, M. Albers, S. Almaraz-Calderon, M. L. Avila, A. D.
Ayangeakaa, B. B. Back, P. F. Bertone, P. F. F. Carnelli, M. P. Carpenter, C. J. Chiara, J. A.
Clark, B. DiGiovine, J. P. Greene, J. L. Harker, C. R. Hoffman, N. J. Hubbard, C. L. Jiang, O. S.
Kirsebom, T. Lauritsen, K. L. Laursen, S. T. Marley, C. Nair, O. Nusair, D. Santiago-Gonzalez, J.
Sethi, D. Seweryniak, R. Talwar, C. Ugalde, and S. Zhu
Phys. Rev. C **93**, 065803 (2016)
42. **Structure of ^{14}C and ^{14}B from the $^{14,15}\text{C}(d,^3\text{He})^{13,14}\text{B}$ reactions**
S. Bedoor, A. H. Wuosmaa, M. Albers, M. Alcorta, Sergio Almaraz-Calderon, B. B. Back, P. F.
Bertone, C. M. Deibel, C. R. Hoffman, J. C. Lighthall, S. T. Marley, D. G. Mcneel, R. C. Pardo, K.
E. Rehm, J. P. Schiffer, and D. V. Shetty
Phys. Rev. C **93**, 044323 (2016)
43. **Shape coexistence and the role of axial asymmetry in ^{72}Ge**
A. D. Ayangeakaa, R. V. F. Janssens, C. Y. Wu, J. M. Allmond, J. L. Wood, S. Zhu, M. Albers,
S. Almaraz-Calderon, B. Bucher, M. P. Carpenter, C. J. Chiara, D. Cline, H.L. Crawford, H. M.
David, J. Harker, A.B. Hayes, C. R. Hoffman, B. P. Kay, K. Kolos, A. Korichi, T. Lauritsen, A. O.
Macchiavelli, A. Richard, D. Seweryniak and A. Wiens
Phy. Lett. B **754**, 254 (2016)
44. **Direct Evidence of Octupole Deformation in Neutron-Rich ^{144}Ba**
B. Bucher, S. Zhu, C. Y. Wu, R. V. F. Janssens, D. Cline, A. B. Hayes, M. Albers, A. D. Ayangeakaa,
P. A. Butler, C. M. Campbell, M. P. Carpenter, C. J. Chiara, J. A. Clark, H. L. Crawford, M.
Cromaz, H. M. David, C. Dickerson, E. T. Gregor, J. Harker, C. R. Hoffman, B. P. Kay, F. G.
Kondev, A. Korichi, T. Lauritsen, A. O. Macchiavelli, R. C. Pardo, A. Richard, M. A. Riley, G.
Savard, M. Scheck, D. Seweryniak, M. K. Smith, R. Vondrasek, and A. Wiens
Phys. Rev. Lett. **116**, 112503 (2016)
45. **In-beam γ -ray spectroscopy of ^{63}Mn** T. Baugher, A. Gade, R. V. F. Janssens, S. M. Lenzi, D.
Bazin, M. P. Carpenter, C. J. Chiara, A. N. Deacon, S. J. Freeman, G. F. Grinyer, C. R. Hoffman,
B. P. Kay, F. G. Kondev, T. Lauritsen, E. M. Lunderberg, S. McDaniel, K. C. Meierbachtol, A.
Ratkiewicz, S. R. Stroberg, K. A. Walsh, D. Weisshaar, and S. Zhu
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101. **Complementary studies of $T = 2$ ^{30}Al and the systematics of intruder states**
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112. **^{29}Na : Defining the Edge of the Island of Inversion for $Z = 11$**
Vandana Tripathi, S. L. Tabor, P. F. Mantica, C. R. Hoffman, M. Wiedeking, A. D. Davies, S. N. Liddick, W. F. Mueller, T. Otsuka, A. Stolz, B. E. Tomlin, Y. Utsuno, and A. Volya, Phys. Rev. Lett. **94**, 162501 (2005)
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I. Mukha, L. Batist, E. Roeckl, H. Grawe, J. Döring, A. Blazhev, C. R. Hoffman, Z. Janas, R. Kirchner, M. La Commara, S. Dean, C. Mazzocchi, C. Plettner, S. L. Tabor, and M. Wiedeking, Phys. Rev. C **70**, 044311 (2004)
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R. A. Kaye, O. Grubor-Urosevic, S. L. Tabor, J. Döring, Y. Sun, R. Palit, J. A. Sheikh, T. Baldwin, D. B. Campbell, C. Chandler, M. W. Cooper, S. M. Gerbick, C. R. Hoffman, J. Pavan, L. A. Riley, and M. Wiedeking, Phys. Rev. C **69**, 064314 (2004)
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M. W. Cooper, S. L. Tabor, T. Baldwin, D. B. Campbell, C. Chandler, C. R. Hoffman, K. W. Kemper, J. Pavan, A. Pipidis, M. A. Riley, and M. Wiedeking, Phys. Rev. C **65**, 051302 (2002)

INVITED TALKS

- 2017
- An MRI Scan of the Nucleus**
APS Fall DNP Meeting, Pittsburgh, PA, October 2017
 - The Role of Weakly-Bound S States Across the Chart**
Nuclear Chemistry Gordon Research Conference, Colby-Sawyer College, New London, NH, June 2017
- 2016
- The Role Weak Binding Plays on the Ordering of the sd States in Light Nuclei**
III Topical Workshop on Modern Aspects in Nuclear Structure, Bormio, Italy, February 2016
- 2014
- A search for unexpected bound states in ^{15}B**
Joint APS-JPS Fall DNP Meeting, HI, October 2014
 - Recent results from HELIOS**
CAARI, San Antonio, TX, May 2014
 - Near threshold s -states**
EMMI, Nuclear at the threshold workshop, GSI, Darmstadt, Germany, February 2014
- 2013
- Structure of $p - sd$ shell nuclei with HELIOS**
INPC 2013, Florence, Italy, June 2013
 - Nuclear spectroscopy with HELIOS**
APS April Meeting, Denver, CO, April 2013

2012	Characterizing neutron $0p - 1s0d$ single-particle evolution in neutron-rich nuclei INT Workshop on the Structure of Light Nuclei, University of Washington, WA, October 8-12, 2012
	On the evolution of the neutron $0d_{5/2}$ and $1s_{1/2}$ orbitals in neutron-rich $0p - 1s0d$ shell nuclei Nuclear Structure 2012, Argonne National Laboratory, Argonne, IL, August 13-17, 2012
2010	Two-neutron cascade at the oxygen drip line Nuclear Structure 2010, Clark-Kerr Campus, U. C. Berkeley, CA, August 8-13, 2010
	Dissertation award in nuclear physics American Physical Society April Meeting, Washington, D. C., February 13-16, 2010
2009	Shell evolution at the oxygen drip line VIII Latin American Symposium on Nuclear Physics and Applications, Universidad de Chile, Santiago, Chile, December 15-19, 2009
2008	Spectroscopy of unbound states at the oxygen drip line Unbound Nuclei Workshop, INFN, Pisa, Italy, November 3-5, 2008
	Investigating the $N = 16$ shell closure at the oxygen drip line Nuclear Structure 2008, Michigan State University, East Lansing, MI, June 3-6, 2008
2007	First Observation of ^{25}O National Superconducting Cyclotron Laboratory User Workshop, East Lansing, MI, August 16-17, 2007
	Unbound states of neutron-rich Oxygen isotopes JUSTIPEN-EFES workshop on shell structure of exotic nuclei 4th workshop by the DOE project JUSTIPEN and the JSPS core-to-core project EFES, RIKEN, Tokyo, Japan, June 23, 2007
	Unbound States of neutron-rich oxygen isotopes: Investigation into the $N = 16$ shell gap Nuclear Structure: New Pictures in the Extended Isospin Space, Yukawa Institute for Theoretical Physics, Kyoto University, Kyoto, Japan, June 11-14, 2007
	Unbound states of neutron-rich oxygen isotopes: Investigation into the $N = 16$ shell gap Direct Reactions with Exotic Beams, RIKEN, Tokyo, Japan, May 30 - June 2, 2007
ACTIVITIES	<p>Referee for Physics Letters B January 2012 - Present</p> <p>Referee for the Physical Review Journals American Physical Society, January 2011 - Present</p> <p>Argonne PS&E Diversity & Inclusion Committee January 2018 - 2020</p> <p>FRIB Users Organization Committee Member January 2016 - 2019</p> <p>NSCL Operations Sub-Committee Member January 2016 - 2019</p> <p>ANL Physics Division Seminar Co-Chair August 2016 - May 2017</p>

APS Division of Nuclear Physics Conference Organizing Committee Member
January 2015 - January 2017

ANL Physics Division Colloquium Committee Member
September 2014 - August 2015

Lecturer at Exotic Beam Summer School on Transfer Reactions
Oak Ridge National Laboratory, July 2014

ANL Physics Division Heavy-Ion Discussion Group Chair
September 2013 - May 2014

ANL Physics Division Colloquium Committee Member
September 2010 - August 2011

Participated in Japan-U.S. Institute for Physics with Exotic Nuclei (JUSTIPEN)
RIKEN, Tokyo, Japan, October 2010

Participated in Japan-U.S. Institute for Physics with Exotic Nuclei (JUSTIPEN)
RIKEN, Tokyo, Japan, June 2007

Attended The Fourth Rare Isotope Accelerator Summer School
Lawrence Berkeley National Laboratory, Berkeley, CA, Summer 2005

Attended The Third Rare Isotope Accelerator Summer School
Argonne National Laboratory, Argonne, IL, Summer 2004